

## Title (en)

A METHOD FOR PRODUCING ACID RESISTANT MACROBEADS CONTAINING NANOPARTICLES AND USE OF THE MACROBEADS FOR ELICITING AN IMMUNE RESPONSE

## Title (de)

VERFAHREN ZUR HERSTELLUNG SÄURERESISTENTER MAKROKÜGELCHEN MIT NANOPARTIKELN UND DIE VERWENDUNG DER MAKROKÜGELCHEN ZUM AUSLÖSEN EINER IMMUNANTWORT

## Title (fr)

PROCÉDÉ DE PRODUCTION DE MACROBILLES CONTENANT DES NANOPARTICULES RÉSISTANT AUX ACIDES ET UTILISATION DE MACROBILLES POUR DÉCLENCHER UNE RÉPONSE IMMUNITAIRE

## Publication

**EP 3536312 A1 20190911 (EN)**

## Application

**EP 18160647 A 20180308**

## Priority

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## Abstract (en)

The present invention relates to methods and means for the production of alginate/chitosan acid-resistant macrobeads comprising alginate/chitosan nanoparticles, wherein the nanoparticles comprise a bioactive agent, wherein the bioactive agent is associated via physicochemical interaction with a polymer. The invention further relates to nanoparticles and/or macrobeads obtained by methods of the invention and such nanoparticles and/or macrobeads for use in eliciting an immune response in an animal. Also encompassed by the invention is the use of a porcine epidemic diarrhea virus (PEDV) antigen as defined herein for producing a nanoparticle or acid-resistant macrobeads and a vaccine comprising such an antigen.

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## Citation (applicant)

- LI ET AL., JOURNAL OF BIOMEDICAL MATERIALS RESEARCH, vol. 83A, no. 2, 2007, pages 383 - 390
- MACHADO ET AL., LANGMUIR, vol. 29, no. 51, 2013, pages 15926 - 15935
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## Citation (search report)

- [XY] WO 2005013941 A1 20050217 - FOND CARLO E DIRCE CALLERIO ON [IT], et al
- [XY] VANDENBERG G W ET AL: "Factors affecting protein release from alginate-chitosan coacervate microcapsules during production and gastric/intestinal simulation", JOURNAL OF CONTROLLED RELEASE, ELSEVIER, AMSTERDAM, NL, vol. 77, no. 3, 13 December 2001 (2001-12-13), pages 297 - 307, XP004328582, ISSN: 0168-3659, DOI: 10.1016/S0168-3659(01)00517-X

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